02 Easter Sunday

In this program you will compute the date of Easter Sunday. Easter Sunday is the first Sunday after the first full moon of Spring. This algorithm was invented by Carl Friedrich Gauss.

1. Let y be the year (such as 2001).
2. Divide y by 19 and call the remainder a. Ignore the quotient.
3. Divide y by 100 to get a quotient b and a remainder c.
4. Divide b by 4 to get a quotient d and a remainder e.
5. Divide 8 * b + 13 by 25 to get a quotient g. Ignore the remainder.
6. Divide 19 * a + b - d - g + 15 by 30 to get a remainder h. Ignore the quotient.
7. Divide c by 4 to get a quotient j and a remainder k.
8. Divide a + 11 * h by 319 to get a quotient m. Ignore the remainder.
9. Divide 2 * e + 2 * j - k - h + m + 32 by 7 to get a remainder r. Ignore the quotient.
10. Divide h - m + r + 90 by 25 to get a quotient n. Ignore the remainder.
11. Divide h - m + r + n + 19 by 32 to get a remainder p. Ignore the quotient.

Easter Sunday falls on day p of the month n. For example if y is 2001:

- a = 6
- b = 20
- c = 1
- d = 5, e = 0
- g = 6
- h = 18
- j = 0, k = 1
- m = 0
- r = 6
- n = 4
- p = 15

Hence in 2001, Easter Sunday was on 15 April.

In your program you will prompt the user to enter the year and then write out the date for Easter Sunday. Your session will look like this exactly. Any deviations from the output will result in points being deducted.

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Enter year: 2001

In 2001 Easter Sunday is on 15 April.
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You can go to the US Naval Observatory website and check your result.